the flip chip package, the solder mask layer partially covering a first top surface of the first mounting pad while entirely exposing a second top surface of the second mounting pads, wherein the first mounting pads are disposed at a peripheral region of the substrate and the second mounting pads are disposed at a central region of the substrate, and the first mounting pads surround all of the second mounting pads.

7. (Third time amended) A substrate structure of Flip Chip package comprising:

a plurality of patterned circuit layers;

at least an insulative layer stacked between the patterned circuit layers for isolating the patterned circuit layers, wherein the patterned circuit layers are electrically connected one another, and one of the patterned circuit layers is positioned on the surface of the substrate of the flip chip package as a top patterned circuit layer, and the top patterned circuit layer comprises at least a plurality of first mounting pads and a plurality of second mounting pads;

a solder mask layer covering the patterned circuit layer on the surface of the substrate of the flip chip package, the solder mask layer partially covering a first top surface of the first mounting pads while entirely exposing a second top surface and sidewalls of the second mounting pads, wherein the first mounting pads are formed at a peripheral region of the substrate and surround all of the second mounting pads;

a chip having an active surface with a plurality of bumps disposed thereon wherein the chip has its active surface facing to the surface of the substrate of the flip chip package, and the bumps are electrically connected to their corresponding first bonding pads and second bonding pads respectively; and

an underfill material filling between the active surface of the chip and the top surface of

the substrate of the flip chip package.

Please add new claims 15 and 16:

15. (New) The substrate structure of Flip Chip package of claim 1, wherein the solder mask is in direct contact with the sidewall and a portion of the top surface of the first mounting pads.

16. (New) The substrate structure of Flip Chip package of claim 7, wherein the solder mask is in direct contact with the sidewall and a portion of the top surface of the first mounting pads.